

Serial No. 10/659,707
Amendment dated February 6, 2006
Reply to Office Action of October 6, 2006

Docket No. YHK-0116

Amendments to the Specification:

Please replace the paragraphs beginning on page 7, line 6 through page 12, line 17 with the following amended paragraphs:

In order to achieve these and other objects of the invention, a driving apparatus for a plasma display panel according to one aspect of the present invention includes a scan driver for applying a first sustaining pulse to a scan electrode during a sustain period; a sustain driver for applying a second sustaining pulse alternating with said the first sustaining pulse to a common sustain electrode during said the sustain period; a sustain voltage source for supplying a driving voltage to the scan driver and the sustain driver such that the first and second sustaining pulses can be applied; and control means for controlling a voltage value of said the driving voltage in correspondence with a driving temperature at which the panel is driven.

In the driving apparatus, said the sustain voltage source includes at least two driving voltage sources for supplying said the driving voltage; and a plurality of switching devices provided among the driving voltage source, the scan driver and the sustain driver.

Herein, said the control means includes a temperature sensor for generating a bit control signal corresponding to said the driving temperature at which the panel is driven; and a switch

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controller for turning on any one of said the switching devices in response to said the bit control signal.

Said The temperature sensor divides a high temperature into a plurality of temperature levels, and generates said the bit control signal differentiated for each temperature level.

Said The switch controller controls said the switching devices such that said the first and second sustaining pulses having a lower voltage value as a temperature of the panel is more raised can be applied in response to said the bit control signal.

A driving apparatus for a plasma display panel according to another aspect of the present invention includes a scan driver for applying a scanning pulse and a first sustaining pulse to a scan electrode; a sustain driver for applying a second sustaining pulse alternating with said the first sustaining pulse to a common sustain electrode; a temperature sensor for sensing a peripheral temperature at which the panel is driven; and a sustain voltage source for supplying a driving voltage to the scan driver and the sustain driver such that the first and second sustaining pulses can be applied; and a timing controller for controlling the scan driver and the sustain driver in correspondence with said the peripheral temperature sensed by the temperature sensor.

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In the driving apparatus, said the temperature sensor includes a first temperature sensor for sensing a high driving temperature; and a second temperature sensor for sensing a low driving temperature.

Herein, said the high temperature is 40°C to 90°C while said the low temperature is 20°C to -20°C.

Said The timing controller controls the scan driver and the sustain driver such that first and second sustaining pulses each having a first period can be applied when the panel is driven at said the high temperature, whereas it controls the scan driver and the sustain driver such that first and second sustaining pulses each having a second period different from said the first period can be applied at the other case.

Herein, said the first period is wider than said the second period.

Said The first temperature sensor divides a high temperature into a plurality of temperature levels, and generates said the bit control signal differentiated for each temperature level.

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Said The timing controller controls the scan driver and the sustain driver such that said the first and second sustaining pulses each having a wider period as said the temperature level is more raised can be applied.

Herein, periods of said the first and second sustaining pulses are set widely as a high interval and a low interval of said the first and second sustaining pulses are widened equally.

Alternatively, periods of said the first and second sustaining pulses are set widely as low intervals of said the first and second sustaining pulse are kept constantly while high intervals of said the first and second sustaining pulses are widened.

Otherwise, periods of said the first and second sustaining pulses are set widely as high intervals of said the first and second sustaining pulse are kept constantly while low intervals of said the first and second sustaining pulses are widened.

Said The timing controller controls the scan driver such that said the scanning pulse having a first width can be applied when the panel is driven at said the low temperature while said the scanning pulse having a second width different from said the first width can be applied at the other case.

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Herein, said the first width is wider than said the second width.

Said The second temperature sensor divides said the low temperature into a plurality of temperature levels, and generates said the bit control signal differentiated for each temperature level.

Said The timing controller controls the scan driver such that said the scanning pulse having a larger width as said the temperature level is more lowered can be applied.

Herein, a width of said the scanning pulse is set to 1.1 μ s to 5 μ s.

The driving apparatus further includes a data driver for applying a data pulse corresponding to the width of said the scanning pulse under control of the timing controller.

A method of driving a plasma display panel according to still another aspect of the present invention includes the steps of applying a sustaining pulse having a first period when the panel is driven at the normal temperature; and applying a sustaining pulse having a second period

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different from said the first period when the panel is driven at a temperature higher than the normal temperature.

In the method, said the second period is wider than said the first period.

The method further includes the steps of dividing said the high temperature into a plurality of temperature levels; and setting said the second period in correspondence with said the temperature level.

Herein, said the second period is more widened as said the temperature level is more raised.

The method further includes the step of setting a voltage value of a sustaining pulse applied when the panel is driven at the normal temperature to be different from that of a sustaining pulse applied when the panel is driven at a temperature higher than the normal temperature.

Herein, the voltage value of said the sustaining voltage applied when the panel is driven at the high temperature is set to be lower than that of said the sustaining pulse applied when the panel is driven at the normal temperature.

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The method further includes the steps of dividing said the high temperature into a plurality of temperature levels; and setting the voltage value of said the sustaining pulse in correspondence with said the temperature level.

Herein, the voltage value of said the sustaining pulse is more lowered as said the temperature level is more raised.

A method of driving a plasma display panel according to still another aspect of the present invention includes the steps of applying a scanning pulse having a first width when the panel is driven at the normal temperature; and applying a scanning pulse having a second width different from said the first width when the panel is driven a temperature lower than the normal temperature.

In the method, said the second width is larger than said the first width.

The method further includes the steps of dividing said the low temperature into a plurality of temperature levels; and setting the second width of said the scanning pulse in correspondence with said the temperature level.

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Herein, ~~said~~ the second width is more enlarged as ~~said~~ the temperature level is more lowered.